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No. 41.

WEEKLY



S. WOOD, (Aged 82 years,)  
Member of the Ontario Bee-Keepers' Association.



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- 1st.—To promote the interests of its members.
- 2d.—To protect and defend its members in their lawful rights.
- 3d.—To enforce laws against the adulteration of honey.

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The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

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SENT BY RETURN MAIL.

The book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with over 100 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard.

The first few pages of the new book are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees.

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Your Name and Address on one side—Three Bees on the other side.



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**Your Name on the Knife.**—When ordering, be sure to say just what name and address you wish put on the Knife.

**The Novelty Knife** is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

**The Material** entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a long time, with proper usage.

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Please allow about two weeks for your knife order to be filled.

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# ESTABLISHED IN 1861 AMERICAN THE OLDEST BEE-PAPER IN AMERICA BEE JOURNAL

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## Editorial Comments

**Scourene** removes propolis from the hands almost instantly, says Ralph D. Cleveland. We suppose all grocers have scourene for sale.

**Honey Crop Ruined by Insects.**—A Utah correspondent reports in the Rocky Mountain Bee Journal that "those little insects are in the alfalfa by the millions, and are in some of the bee-hives eating up the honey," resulting in only a fourth of a crop.

**Honey and Wax in France.**—Government reports show that in the ten years ending with 1901 the value of wax produced was nearly half as much as that of honey, or 44 percent. That looks like a large proportion of wax; but then the yield of honey was less than 11 pounds per colony.

**A Middle Bar in Place of Wiring,** is advised by the editor of the Australian Bee-Bulletin. He says:

We, ourselves, have not used wired foundation for several years, both on account of its stretching when the frame is full of comb and honey, and because the horizontal stick across the center of the frame is much better, and less trouble to put in. We know a number of good bee-keepers who are adopting the stick-plan instead of wires.

**Choice of Location.**—On page 579, an editorial ends with saying, "On the whole. . . . the probability is that not one bee-keeper in ten will find himself better off anywhere in the world than right where he is now." This view is neatly confirmed by the first item in the editorial columns of the September Bee-Keepers' Review, where Editor Hutchinson says: "Michigan seems doubly desirable as a home, since taking my Western trip."

**Bees Embalming Mice.**—The question has been raised whether there is any truth in the statement that when some offending body as large as a dead mouse is found in a hive the bees seal it hermetically with propolis. Perhaps in the majority of cases, when a mouse dies in a hive, it will be found dried to a mummy, with no offensive smell, but with no coating of propolis. At least two cases, however, are reported in Gleanings in Bee-Culture, in which the dead mouse was entirely encased in bee-glue.

**A Variation of the Stanley Cartridge,** or queen-nursery, is given in Gleanings in Bee-Culture, as used by the A. I. Root Co. Instead of queen-excluding zinc being used, the perforations are smaller, so that workers can not get through. Instead of gun-wads, cylindrical wooden plugs are used. Through the upper one of these plugs a nail-point projects, the cartridge being fastened to the cell-bar by means of this cell-point. Through the lower plug a hole is bored and a smaller plug inserted. This smaller plug is hollowed to contain candy.

Some use leather instead of gun-wads for plugs, and claim they are better.

**Co-operative Advertising.**—In the discussions as to the advantages of organization among bee-keepers, very little has been said about the matter of calling the attention of the public to the great desirability of making honey a leading article of diet. Yet the gain possible in that direction is not one of the least to be expected from proper united action. Morley Pettit, in the Farmers' Advocate, uses these sensible words on the subject:

A matter which is at present sadly neglected is the advertising of honey. The very heavens resound with the names of food fads and medicines, while the most pleasant and nutritious of natural sweets is comparatively unknown in our Canadian homes. The reason is not far to seek. "Honey is honey," and, under existing conditions, if Smith advertised he would be increasing the sale of Brown's honey almost as much as his own. The only way out of it is for Smith, Brown, *et al*, to form a honey exchange and advertise the honey of the exchange. They would then agree upon a remunerative price, which would not become exorbitant, by the way, on account of the direct competition of fruit, syrups, and foreign honey. They would advertise extensively until "honey" would become a household word, learned along with "papa" and "mamma" by the lisping child.

**"C. O. D. by Mail"** is a somewhat novel thing mentioned by H. H. Charles, in Class Advertising. More than a thousand transactions of that kind were made by him with great satisfaction. A customer would want some part of an incubator and order it, perhaps without knowing the cost. If sent by express it would cost 25 cents, if by mail perhaps 3 or 4 cents. It was sent by mail with instructions to the postmaster to collect on delivery and remit, deducting his fee, which was never more than 10 cents. This might not be a bad plan with small orders in bee-supplies. But we wouldn't like to advise it until it is approved by the post-office department of our government.

**Commercial Organization** is up for discussion nowadays, and it is well that it should be carefully viewed from all sides. Not only should the advantages be shown, but the difficulties and objections as well. Some of these latter are considered by Hon. R. L. Taylor in the Bee-Keepers' Review. He shows the difficulty of making local organizations with the hope of uniting these into State organizations, and later uniting the State organizations into a single National organization. And yet, in the end, that is the very thing he advises, his views being summed up in the caption, "Commercial Organization Must Begin Locally." The only difference that appears between what is so hard to be done and what ought to be done is that action should only be taken in such localities as feel the need of it. He says:

"When several bee-keepers in the State of Michigan, or in any section of it, think they can dispose of their crop to better advantage by union, let them unite in such manner as seems best suited to their circumstances. If they are successful, their successes and mistakes will be a source of sound instruction to those of other communities who shall desire to take like action. Thus, each organization will be firmly cemented by a natural growth through experience, and, if need appear, its roots and branches will reach out until they meet and intertwine with those surrounding it, and all shall become one great growth, furnishing shade to all of the whole land who seek its shelter."

But if each organization is to intertwine with those surrounding it, will there not be necessity for some one to take the initiative to direct the intertwining? And if all are to become one great growth, who or what is to bring about the merging?

Probably the majority who urge unity of action advise the reverse course, beginning at the center and working outward, and they will be likely to ask why it may not be better to form the main organization at the start to foster the local growths, rather than to wait the years necessary for natural growth to blend all into one.

## Miscellaneous Items

IN LOS ANGELES AND ON CATALINA.—During the first day of the convention, Prof. Cook planned a trolley-car ride down to Long Beach, on the Pacific's sandy shore, about 30 miles from Los Angeles. It was found that if 100 could be pledged to go, the rate would be only 30 cents for the round-trip instead of 50 cents. The required number was easily secured, and so early Thursday morning all gathered at a certain point, and boarded the cars for Long Beach.

Electric cars get up some speed here in Chicago, but at times these Long Beach cars seemed almost to fly. Along the line was some of the best farming country we had seen in the West. There was one or two dense eucalyptus woods, alfalfa fields, one apiary, and other objects of interests.

Long Beach was soon reached, and we had about an hour to stay. Some of our crowd went in bathing in the Pacific, as well as in the large natatorium, where the water in a tank about 40x80 feet is kept at a certain temperature. The tank was about 4 feet deep at one end, and gradually became deeper toward the opposite end, where it was probably 7 feet deep.

Among those who "took their morning bath" in the tank, were: Prof. Cook, Messrs. Hyde, Hutchinson, Hershiser, Harris, Moe, Ivy (and Mrs. Ivy and child), and a number of others that now we can not recall. It was great sport. One would think that when such 200-pounders as Hershiser tumbled in there would be an overflow, and everything would be flooded, but evidently ample provision had been made for such emergency, so no one of the spectators at the edge of the "bath-tub" were drowned!

Mr. France went out on the pier, and with a fisherman's line that he borrowed, dropped a small empty bottle down to get a sample of the salty Pacific. He said he had a sample of Atlantic water, and now wanted some of the Pacific to take home.

The time to return to Los Angeles and the convention soon arrived, and all were rushed back in a very short time. It was a pleasant and refreshing trip.

At the close of the Wednesday afternoon session, Mr. L. E. Mercer, who had bought a \$1200 automobile with some of his honey crop, took Prof. Cook, Mr. Benton and us for a spin around Los Angeles. It was our first experience with that kind of a "horse and buggy." Mr. Mercer had had it about a month, and seemed to know how to manage it perfectly. He took us out on some of the finest streets, around parks, and where we could see the best parts of the city—where beautiful palms, waving pepper-trees, and the tall eucalyptus adorned the sides of the streets. It was a delightful ride, for which we were indebted to one of California's biggest bee-keepers.

The convention closed on Thursday afternoon. During the sessions a trip to Catalina Island was planned. So about a dozen started Friday morning at 8 o'clock for East San Pedro, about 20 miles away, to take the boat to cross the 28 miles of the Pacific to the Island. It was a bright morning, and promised to be a lovely day. But it is needless to say that, from May to November, they said no other kind of days happen there. We often found ourselves saying in the morning, "Well, we're going to have a bright day to-day," when we thought, "Why, you tenderfoot, they don't have any other kind out here, day after day!" So it was bright, glaring sunshine all the time. Rather hard on Eastern eyes.

We all finally got aboard the boat for Catalina—the famous outing place of Southern California. The boat hadn't gone far before some of the passengers seemed to feel as if they had had too much breakfast. So they began to "unload," and thus help the fish out with "a bite to eat." Dr. Miller concluded he'd better go into the cabin and sit down, and meditate on what he "didn't know." Mr. Hyde couldn't find a vacant seat or chair, or any place to hide, so he sprawled out on the carpeted floor, and tried to "enjoy" himself. He was a perfect picture of homesickness, lonesomeness, seasickness, and general gone-

ness and despair. He wasn't a bit sociable, and that is an unusual condition for him.

We really enjoyed the ride all the way, our stomach keeping right side up and in good shape all the time.

It took about two hours and a half to cross over to Avalon, the only town on the island of Catalina. It is situated on a beautiful, small bay, on the east shore. There seemed to be but very little shore to the Island, but mostly steep rocks. Avalon is built in a little cozy depression almost under the high hills. At first one wonders how it is possible to get out of the town except by water, but there are stage roads through various parts of the Island. There is also a ranch somewhere on it. A certain portion is set aside as a hunting park, where may be found wild mountain sheep and other animals. Sportsmen may "sport" there by paying for the privilege. We regretted not being able to stay longer and see more of Catalina.

Right here we wish to mention one of the most cordial and kindly bee-keepers we met in California. His name is Wm. Ross. He went to California some 18 years ago, from Ontario, Canada, on account of his health, which he has almost wholly regained in that "Land of the Climate," as we feel like calling it.

Well, Mr. Ross has a tent-cottage on Catalina Island, where he and Mrs. Ross and their youngest daughter, Bessie, spend a few weeks every summer.

We (with Mrs. York) at once engaged a room at one of the hotels,



MR. JULIAN AND HIS GLASS-BOTTOM BOAT "IOWA."

and then went out on one of the larger glass-bottom boats. There is a smaller row-boat (shown herewith) which also has a glass bottom. In this latter we took a ride on Saturday morning. It belongs to a man named "Julian," who has been there for about 40 years, and knows just the best route to row people so as to see through the glass bottom the greatest variety of shells, fishes, seaweed, etc. It is truly wonderful how much of interest can be seen through that window at the bottom of the boat. Why, one can see down from 50 to 100 feet, as the water is so clear. Never go to Avalon without taking a ride or two on the glass-bottom boat.

After the trip in the larger glass-bottom boat, Friday afternoon, on which trip Mr. Ross and Bessie also went, he invited us to come to their tent-home for tea, which should consist of some bread, milk, and California's best honey. It was a rare treat. "Mother" Ross just took us wanderers right in, and made us feel right at home. And such a meal! Well, the bread and honey and milk disappeared wonderfully fast, we can assure you. Such appetites as we did have at Catalina! It seemed that everything tasted so good.

During the evening there was a fine band concert for the summer resorters of the village, but we were tired, so sought our room and tried to "sleep the sleep of the just."

The next morning, we hired a row-boat, and with Mrs. York and Mr. Ross tried to do a little fishing in Old Pacific. We thought to catch a 30 or 40 pound yellowtail, or even a leaping tuna wouldn't have been despised! But we didn't get a bite!

About 11 a.m. we went to the bath-house and rented a suitable costume, then got into the Pacific with the rest of the bathers. Miss Bessie had a white cotton flannel suit in which she made a pretty picture. And she could swim in fine style, being quite at home in the water.

At 3:40 we were to take the boat for East San Pedro again, and



then the train to Los Angeles, and after that the electric car for Pasadena, where we were to stop over Sunday. We arrived at our destination about 9:30 p.m., two very tired travelers. Oh, how glad we were to get to rest.

On the return voyage on the Pacific, Mrs. York seemed to get wobbly on the boat, as it was a rather choppy sea. After giving up some of her dinner, she felt a little better. The ride on the water did not affect us unfavorably at all. Too tough and hardened, we suppose.

Before leaving lovely Avalon and Catalina, we wish to quote a little from a descriptive circular of the Island, which tells it so much better than we can. Here it is:

**SANTA CATALINA ISLAND.**—"A land where Winter hath fair Summer wed," a bit of world by itself, picturesquely located in the Pacific Ocean, 30 miles from Los Angeles.

Santa Catalina is truly a "Garden of the Gods in the land of the free." The island contains 47,000 acres of plains and valleys, and abounds in beautiful and lofty mountains, stupendous rock cliffs and precipices, and in climate, natural beauties and opportunities for outdoor pleasure comes as near perfection as one can find.

**THE MARINE GARDENS.**—The Ocean, along the entire coast of Catalina Island, is a wonderful natural aquarium. The water is still, tropically rich, and clear as a diamond; hence the famous glass-bottom boat, down through which visitors peer at the wonders of the deep, provide an entertainment found nowhere else in the world. Here one sees a perfect forest of seaweed, in all the colors of the rainbow, in the branches of which float beautiful fishes of rare and radiant tints, being the home of gold perch and schools of emerald fishes, while the black, long-spined eelhus, star-fishes, sea cucumbers, abalones and octopi are seen clinging to the bottom of the ocean, and in the intervening water scores of rich jelly fishes of every form and shape captivate the eye. Nowhere so near a city of 100,000 inhabitants can such a strange and fascinating panorama be witnessed as that to be had from the window of the Santa Catalina glass-bottom boats.

**BATHING.**—The boating and fishing is superior to that of many California resorts. The perfect climate and sanitation, the smooth bays and facilities for safe boating and bathing, render it the ideal place for ladies and children. The little bays are crowded with fishing boats, steam launches and yachts, all providing for the public pleasure.

**FISHING.**—Fishing is a sport that can be better enjoyed here than any place in the world. Here may be caught finny monsters that weigh from one to 500 pounds, while yellowtail, barracuda, rock bass and albicore afford the fisherman all the sport he can ask for. The famous leaping tuna is caught nowhere else with rod and reel.

A novel sport confined to Catalina is flying fish shooting. The big tunas rush in, driving the flying fishes out of the water in flocks, like quail, and at this time the sportsman on a launch can pick them off with a shot-gun.

**CLIMATE.**—Catalina is a natural sanitarium, combining all that is best in the Madeira Islands and the famous Riviera. Even in mid-winter the days are mild, frost being unknown; the Island is then a flower-garden. It has valuable sulphur springs, and the opportunities for salt baths and enjoying the remarkable varieties of climate, make it an ideal resort.

The days are never uncomfortably warm in summer, nor too cold in winter, presenting conditions which challenge comparison. The average temperature of July days at Avalon is 65 degrees. In August the highest mean temperature observed at 6 in the morning was 72 degrees.

We liked Avalon so much that we want to return some time when we can remain there a week or two. It is an ideal place to rest. The climate is simply perfect. There is just enough going on there to keep one from getting too stagnant and out of touch with the world. There is a daily paper published on the Island called "The Wireless." It is a great place to purchase curiosities and mementoes to carry home.

If you ever go to Los Angeles, don't fail to cross over to Catalina Island, and stay there a few days. You will never regret it. And if you can find Mr. and Mrs. Ross, and Bessie, you will have a much better time there than you can possibly have otherwise.

Next week we will tell how we and some of the other convention members spent Sunday in California.

**OUT OF THE BEE-SUPPLY BUSINESS.**—Again we find ourselves entirely out of the bee-supply business; and also the honey-business. The transfer was made to The A. I. Root Co., on Oct. 1, 1903. (See their ad.) For several years we have felt that we had entirely too many responsibilities, with publishing the American Bee Journal, looking after a bee-supply business, and handling a large retail and wholesale honey-trade. It was either drop some things or live a shorter time. We preferred to do the former, and have acted accordingly. It is, of course, with much regret that it seemed necessary for us to make this decision.

We hope now to have more time to devote to the American Bee Journal, with which we have been connected either as employee or editor for almost 20 years. We have always been in love with it, and trust that with the continued help of its host of loyal readers and contributors we may in the future be able to make it a greater power for the advancement of the industry which it represents than it ever has been in all its past nearly 43 years. **GEORGE W. YORK & Co.**

## Convention Proceedings

### THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 631.)

#### WEDNESDAY AFTERNOON SESSION.

After calling to order, J. F. McIntyre, of California, read a paper on

#### HOW TO MAKE MONEY PRODUCING EXTRACTED HONEY.

To make money producing extracted honey it is necessary—

First, to produce a large quantity of high-grade honey; and

Secondly, to sell it for a good price.

In starting out to accomplish these objects the first thing to be considered is the location, or locations, as it will be necessary to keep more than one apiary if you make very much money. If you can find a good field where you can keep a number of apiaries around your home apiary without overstocking or crowding out other bee-keepers, you are fortunate. I shall not attempt to tell you where to find this "Eldorado," because every field has some drawbacks, and you might not thank me when you find them out. I will, however, name some of the things to be taken into consideration in selecting a field.

The quantity and quality of the honey that can be produced, an open field, cost of transportation to market, society, healthfulness of climate, annoying insects, excessive heat in summer, or cold in winter.

Having found your "Eldorado," it is important to start with a hive that you will not regret. I have found nothing better than the 10-frame Langstroth, with an unbound zinc queen-excluder between the super and brood-chamber, and a painted duck-cloth under the cover. All combs in the brood-chamber should be built from full sheets of foundation.

It is also important to stock your hives with the very best stock of bees to be found in the world. I can only recommend that you buy some queens from every breeder who claims to have superior stock, and breed from that which is best.

A system of management should be adopted that will prevent excessive increase, and keep both the super and brood-chamber full of bees during the honey-flow.

Honey should not be extracted until it is ripe, otherwise it must be evaporated to prevent loss from fermentation. It requires experience to tell when honey is ripe enough to extract. In some seasons, and in damp locations, the nectar from the flowers is very thin, and the honey will often ferment after it is all sealed over; at other times, and in dry locations, it is sometimes thick enough to keep, when the bees commence to seal it over. In most locations it is about right when half sealed.

It is economy to have the best tools to work with. At my Sespe apiary, this season, my daughter Flora, 19 years old, extracted all the honey, 10 tons, as fast as a man could cart it in; but she had an 8-comb extractor driven by water-power to do it with. At an out-apiary it cost me \$3.00 per day to get the same amount of honey extracted with a 6-comb Cowan extractor. Two good honey-carts, carrying 4 supers, or 32 combs of honey, at a load, are necessary to bring the honey in from the apiary, one cart being loaded in the apiary while the other is extracted in the honey-house.

The capping-box should be large enough to hold all the cappings from one extracting, to give time for the cappings to drain dry before the apiary is ready to extract again. Bingham honey-knives, kept clean in cold water, are the best to uncup the honey until we get a power-driven machine that will uncup both sides at one operation.

I use smokers with a 4-inch fire-tube.

Plenty of tank-room is necessary to give the honey

time to settle and become clear and sparkling before it is put into cans or barrels, and to prevent delay in extracting, by having to wait for cans or barrels to put the honey in.

Having a field and apiaries, with machinery to run them, and a good system of management, we will now consider the marketing of the crop.

If the cost of producing a pound of honey is 4 cents, it is easy to see that the man who is obliged to sell all of his honey at 4 cents will soon conclude that bees don't pay, and get out of the business. To make money, he must be able to hold his honey until the market price rises, for every cent he makes is in the difference between the cost of production and the price at which he sells. Organization undoubtedly helps to hold up prices. The organization of the California National Honey-Producers' Association, together with a medium crop instead of a full crop, as was expected early in the season, has kept the honey market from going to pieces in California this year; but organized weakness is not strength—it is only a bluff. The Steel Trust has been considered a pretty strong organization, and yet it has not been able to prevent a depreciation of its stock to the extent of over \$300,000,000 in the last few months. Why has this thing happened? Too many of its members had to have money, and steel stock had to be sacrificed to get it.

When the holders of any stock or commodity are financially weak, the price of that stock or commodity is bound to fall; but when they are all strong the price is equally sure to rise.

When a large crop of honey is harvested the bee-keepers, or a large majority of them, are financially weak, and while they are making sacrifices of their honey to get money the price is bound to rule low; but their honey, when sold, goes into the hands of strong men, and soon the price begins to rise. If you have money to live on, and no debts to pay, just wait until it gets to the highest price, then sell.

J. F. MCINTYRE.

Mr. York, in the absence of the writer, then read the following

#### RESPONSE BY E. S. LOVESY.

I fully agree with Mr. McIntyre in every point he advocates except queen-excluders. I can get more honey by giving the queen free range, as I run entirely on the division plan, giving the bees plenty of room; and if the queen should get into the surplus boxes, I can make good use of the brood, making new colonies or building up. I believe in building up strong colonies before I divide, as the results are often disastrous to divide and attempt to build up afterward.

I believe with Mr. McIntyre in the careful selection of a location, 10-frame hive, a liberal use of foundation or drawn comb, a good system of management that will keep the hive full of bees; and all honey should be properly extracted and ripened. If these conditions are complied with, as a rule it can be held for the highest possible price.

I also agree with Mr. McIntyre that the bee-keepers are in need of a stronger organization. We should not forget that "in union is strength;" a lack of which may cause our energy, at least, to be partly lost.

I regret that conditions are such that I can not be at the convention.

E. S. LOVESY.

L. L. Andrews—I would like to ask Mr. McIntyre what he thinks of the use of the hot knife as compared with the cold knife in extracting?

Mr. McIntyre—I am sorry to say that while I have seen it done I have never uncapped any honey in my life with a hot knife, but after putting the cold knife into the hands of others, and showing them how to use it, they would never use the hot knife again.

George M. Wood—I would like to ask Mr. McIntyre to explain his method of using the cold knife?

Mr. McIntyre—I have a little wooden keg usually, because it does not dull the knife when you throw it in. Three knives are about all you can handle. We take a knife out of the water all soaked, clean and sharp, run it to one side and the capping drops off, then up the other side of the comb. You can use it on several combs that way. Whenever a knife gets dirty—the least bit of wax on it—it goes right in to soak off, and when it comes out it is wet, clean, and free from honey, and, being sharp, it runs up the comb and cuts it right off, sleek as a razor would do it, and does it much quicker than a hot knife.

Mr. Wood—Do you use a long knife?

Mr. McIntyre—I would not use anything but a Bingham knife.

Mrs. D. A. Higgins—I would like to ask Mr. McIntyre whether he can uncap well-cured white or black sage honey with a cold knife?

Mr. McIntyre—We do not uncap any other kind—very little of any other kind. This is the honey (sample produced). You can turn it up for some time on a cold day before it will come out. It seems very queer that any one should run up against any difficulties. The hot knife, according to the way I have seen it used, will run half way up a comb or so, as far as it will go; but our cold knife will uncap several combs.

Mrs. Higgins—I find it will uncap one comb; that is all.

Mr. McIntyre—I always cut from the bottom up, because the comb is leaning a little that way, and as we run the knife up it drops right clean.

Frank Benton—Since Mr. McIntyre has had a great deal of experience in producing extracted honey on a large scale, I would like an expression from him as to how the different races of bees compared. He is not restricted in extracted honey to the kinds of bees that will produce white combs, since, of course, capping comes away anyway, and the honey from one is as good as the other.

Mr. McIntyre—I commenced bee-keeping in California with some stock I bought from Dr. Gallup. I brought his apiary here, and we had some very nice imported Italians. Later I got some Cyprian stock. I crossed these, and for extracted honey I find that I can get more honey with some Cyprian blood than with the Italians alone. They have really proved to be the strongest honey-gatherers I have had. I do not like the stinging qualities of the pure Cyprian. I have crossed them somewhat with Italian-hybrids. If I had crossed them with the Carniolans, which, I believe, is the favorite cross, they would be pure hybrids. These Italians crossed with Cyprians have proved to be the best bees in my hands.

J. F. Flory—Are they not crosser than the Italians?

Mr. McIntyre—Yes; I think you can not add Cyprian blood without adding a little temper. I think probably there is a little Cyprian blood in the queens. Those are selected from may be 10 to 20 generations bred in my own apiary, and I can not tell whether there is Cyprian blood in a queen, but I pick her for her business qualities. I would not take a queen that would sting me all to pieces; I would not breed from such a queen. I want them to be easy to handle, nice in color, and I want them to be great honey-gatherers. Those three points are about all I look to. I can not ask a queen whether she has any Cyprian blood in her or not, if she is easy to handle.

Geo. L. Emerson—I have not much to say, but I was interested in this cold-knife proposition, and thought perhaps we might get a little more information. Mr. McIntyre is a very large honey-producer. We have never been able to use a cold knife with any degree of satisfaction whatever. We seem to have a diversity of opinion here. There may be some that think they will have to change and use a cold knife instead of a hot knife. If they are going to do that they ought to know how to do it. If there is any way Mr. McIntyre can show me how to get away with that gasoline stove, I would like to have him do so; but we must have the same quality of work, even if we are a little warmer in doing it. I believe that is all.

T. O. Andrews—I was going to say if there was crossed blood in those queens Mr. McIntyre sent me, they are the most uniform I ever got together. So I thought they were pure Italians.

H. H. Hyde—I would like to know if Mr. McIntyre has ever used shallow frames for extracted honey, 5½ inches deep.

Mr. McIntyre—No, I have had some frames 7x17. They would do very nicely to extract from, but they did not suit me for brood-chambers, so I have only the 10-frame Langstroth. We usually manage to get them down near the super, which is so much heavier; get the combs out and extract them about from eight to ten days, according to the way the honey flows.

Mr. Hyde—We have used both shallow and Ideal supers, and we have concluded we can handle more conveniently, and quicker, by using the Ideal super for extracted honey; and, in extracting, we have a large extractor that takes two of the frames in each basket. When we come to uncap we can uncap one side, and do not go over it twice. But the principle is in not using the Porter escape at all. One man simply takes hold of the super, the first man smokes it freely. One man gives it a wobble. In a few minutes we take it in the house, and then can take off the super about as quick as one frame, and we consider it quite a gain also in uncapping.



Charles C. Schubert—I would like to ask whether Mr. McIntyre uses a bee-escape? also, whether he has an entrance to the super above the queen-excluder?

Mr. McIntyre—No, to both questions. I bought 50 Porter escapes and tried them to that extent, and the bees did not get out quick enough to suit me, so we went after them with wet brushes. We use a smoker and a wet brush—a brush made from manilla rope. I take a brush about five inches long. That does not hurt the bees any, and empties the supers quickly. I have tried different sized brood-chambers. I thought the 10-frame Langstroth was not big enough and tried 60 frames once, but when the colony swarms the swarm puts in too much time filling up the brood-chamber.

John F. Crowder—I would like to ask Mr. McIntyre where the apiaries are not diseased do you put the same combs back?

Mr. McIntyre—I always change combs. We take the empty ones and put on top of the hive. These empty ones are from some other hive.

A. Arthur Hansen—I would like to ask Mr. McIntyre how that cross is in regard to swarming—the cross between the Italian and Cyprian?

Mr. McIntyre—Well, I have some years thought I had a pretty fine non-swarming lot of bees. They swarmed hardly any, but filled up their hives in grand shape. Then, in other years, when we have had lots of honey coming in, the apiary would just go wild, and nearly every colony would swarm. I think they are not as bad as pure bees. I can rear bees that never swarm, but they are very poor.

Mrs. J. B. Cherry—My experience with bees showed me for two seasons that our poorest hybrid black bees store more surplus honey. How do you account for this?

Mr. McIntyre—I have seen hybrid colonies that would probably excel other colonies in the apiary—may be any other colony in the apiary—and I suppose every bee-keeper has seen the same thing. But I never made a practice of breeding from that hybrid colony, for the simple reason that if one should send out such queens as that over the United States, they would soon get a bad reputation. If everybody were writing back, "The queens you sent me were hybrids," it would hardly do. I do not deny but what the black blood in some colonies seems to have no detrimental effect, and yet, in other colonies—I have seen, may be, 20 cases where hybrids were very poor compared with the strain of bees I have.

Mr. Andrews—I want to say in reference to that knife proposition, that I first got the idea of the cold knife from Mr. Wilder. I found by keeping the knife very sharp, and then cutting toward the top wall, I could always uncup two combs with the hot knife while I was uncapping one with the cold knife; so I went back to the hot.

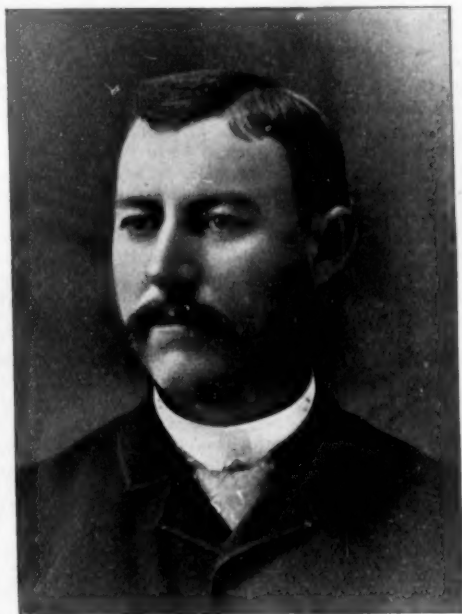
A Member—I would like to ask if you raise the combs from underneath the queen-excluder, and place other empty combs and foundation below to give the queen more room? I find they swarm a great deal unless I do that, and that makes lots more work.

Mr. McIntyre—No, not as a rule. My practice is to leave the super full of honey on the hives in the fall if possible, and in the spring these colonies will breed up lively without any assistance from me. I go over to see the queen, clip her wing, and they get very little more attention until somewhere along about the first of April. They will swarm, a good many of them, having the queen-excluder on. I catch the queen, set the hive back, and put the brood-chamber, filled up with comb foundation, in the place where the old one stood, and let the swarm go back. Then I have every queen in the brood-chamber. That is the main reason why I use queen-excluders. They hinder the brood some in going back into the supers, but I don't have second swarms. If I have some queen-cells ready to hatch I put one right in. The queen hatches and finds there are not enough bees to keep the brood warm, she tears the cells all down. A little later in the season, when I get my apiary full that way, I take the next lot, brush all the bees off of these brood-combs, and put one set of them with each one of these. I don't put it all on, mind you, because once in awhile I find these have supers full of honey. Then I take the honey and put it above, and put the brood below. In that way every one of my colonies stores several supers full of honey every season. I do not have a lot of little, weak swarms where the bees do not get into the supers.

Mr. Gilstrap—I have worked with bees in Central California, Southern California, and in Colorado, and I find location and quality of honey produced has a great deal to do with the use of the hot or cold knife. Lacking 15 cans we took off 9 tons of honey last year, and never used any-

thing but a cold knife. I find keeping the knife sharp has a great deal to do with it. There are only two locations where I have worked with bees where I have found the hot knife necessary. Where the honey is not very stiff the cold knife can be used very satisfactorily.

J. A. Delano—My experience with the hot knife and cold has been during the last 15 years I have been in the bee-business. I started in with the idea that the cold knife was a good plan. It saves a fire in the honey-house, the heat, and bother. Another reason I thought it a good plan, was because several of the large bee-keepers were using the same plan. Mr. Charles Graham, one of the largest bee-keepers, used that plan himself, keeping the knife sharp, and running it on the same plan as Mr. McIntyre. But I found, after I had used it for about five years, that if we had boiling water to put our knives in, and kept them sharp, we could accomplish probably twice as much, and do the work a good deal easier. In this State we have different kinds of honey in different localities. With sage honey you can use a cold knife very well, as there is dust you have to wash off with a cloth; but I find in general practice the hot knife takes the lead in my experience. Mr. Graham has also done away with the cold knife, and taken up with the hot-water process. In extracting from an apiary where



J. F. MCINTYRE.

the honey-flow is coming fast, in sage honey, and where a couple or three men have to handle so many combs in a day, a cold knife would be at a disadvantage. At least I think it would be with us. When we take off a ton, or ton and a half, with two or three men, we must use the easiest plan. Along this coast the cold knife works very successfully because the honey is thinner, and you will find it will cut easier, but you go inland, where it is drier, and it is harder to run a cold knife.

J. S. Harbison—I have inspected quite a large quantity of extracted honey, and I find one of the evils is the excessive use of smoke in handling the combs. Much very choice honey has been ruined in that way, so much so that a delicate taste would reject it on account of its bitter taste. You can not be too careful with reference to this matter. Honey is very sensitive to acquire a bad odor, as much so as butter. Another thing, there is too much honey extracted in an unripe state. It will never be the same honey as when ripened in the hives. These two things are something you must give more attention to, or else extracted honey will fall into disrepute. Carelessness in these matters is one thing that has prevented a more general use of honey. I have had much experience along these lines, and I caution you about using smoke, even on comb honey, because honey is always sensitive, and will acquire a bad taste. The importance of these matters seems to have been overlooked by a great many honey-producers. I warn you

in these particulars. You must have your honey in as nice shape as Nature produced it. Much fine honey has been ruined by carelessness in this direction, so much so that I would reject much sage honey because of its bitterness.

(Continued next week.)

## Contributed Articles

### Disease-Germs—What They Are, and What Promotes or Hinders Their Propagation?

BY J. E. JOHNSON.

FIRST, let me quote from the works of Prof. George Mewman, M. D., F. R. S., Demonstrator of Bacteriology in Kings College, London:

"Latterly, bacteriologists have come to understand that it is not so much the presence of the organisms which are injurious to man or other animals, as it is their products which cause the mischief. These products are termed toxins."

Now, as I have said before, these bacteria are vegetable organisms, or little plants. Some bacteria are reproduced by budding, some from spores, and others by fission. In a favorable medium they increase very rapidly. The pear-blight bacillus, for instance, increases by fission, and one bacillus, in favorable media of proper temperature, and containing enough nutriment, would in 24 hours produce 17,000,000 similar organisms, or over 4,000,000,000 in three days. This organism is plainly visible when magnified 1000 diameters.

Dysentery among either animals or bees is caused by microbes which inhabit the soil near the surface, and are conveyed in dust form to the food eaten or the air inhaled. The three chief forms of the lower bacteria are thus: Round cell form are called coccus; rod form, or those that are longer than broad, are called bacillus; the blight bacterium is about the form of a grain of wheat, and is called bacillus. Those of thread form are called spirillum. The lower bacteria are flowerless, the higher forms of bacteria, however, have actual flowers. Anaerobic bacteria can only live in liquids, as the free oxygen kills them, or, rather, the aerobes of the air are antagonistic to them. If the blight-germs could only live in liquid, then the aerobes of the air would kill them on the bee's tongue. However, the blight-germs are not of anaerobic nature, although moisture is necessary to their propagation. A culture containing these germs, if merely smeared on the twigs of a pear-tree, will cause the tree to become diseased, if the tree is favorable to the propagation of the blight-germ.

But as I have written on the blight question before, and this is a bee-paper and not a fruit-paper, I will not tire those who are not interested in fruit; however, let me say that this year I had one limb that blighted during our rainy spell, but as it had turned dry when I found it, and a neighbor fruit-grower came over, we cut it out and examined it thoroughly; the blight had died out of itself. There is a good deal of blight near me this year, but not so much as last. Some pear-growers cut out their blight and some did not.

Prof. Burrill, of the Illinois Experimental Station, who was the first to discover blight-germs, in 1879, and announced it to the public in 1880, thinks it quite possible that they live in the soil, and if such be the case, blight-germs would travel in the air when the air was real moist, especially in fog.

Prof. Burrill is sending me cultures or artificial media; he agrees with me that when trees are properly fed they become more resistant to blight.

It is the foul-brood germ I wish to write about. As I have increased to over 50 colonies, and (nothing preventing) will make further increase; and as I find there is an apiary only 25 miles away badly affected with foul brood, which makes me fear it may be even closer, and if my bees get it I want to be able to fight it to a finish. And although this article may not establish any facts concerning the disease, it may draw out more substantial information.

I am not satisfied with the views of some, as very able

men, who have had much experience with foul brood, seem to differ greatly. Mr. France and Mr. McEvoy seem to give diseased honey the principal credit of spreading the disease, while, in Cuba, some say honey from a diseased colony will not give others the disease. (See *Progressive Bee-Keeper* for July, page 187). Now, there are such men as Pasteur and others who have spent nearly their whole lives in investigating the nature of the different pathogenic germs, and it is an established fact that nearly all, if not all, diseases of the animal kingdom are due to microbes; also, that there are some germs that are antagonistic to others, and that there is a constant struggle for the survival of the fittest, or strongest; especially is it so between the pathogenic and saprophytic germs. Two species will often not grow in the same culture together, as the product of one species is death to the other. Now, according to Dr. Germano and others, some disease-germs or spores will survive drying much longer than others. Miguel has demonstrated by tests that some spores can remain alive in a dried state for at least 16 years, while others only a few hours. Now, the question I want to ask is, How long can the foul-brood spores survive drying?

At the Chicago convention, Mr. France related his experience with one case in which the bees contracted the disease from old, foul-broody combs that had been sealed up in hives for eight years. If I mistake not, it is a fact that bacteria must have their proper diet the same as other plants.

Let me further quote Mr. Mewman's works on Bacteria, page 12: "From what we have seen of the diet of micro-organisms, we shall conclude that in some form or other they contain nitrogen, carbon, and hydrogen." The reason I withhold nitrogen from my pear-trees is because I believe the blight-germs' diet to consist largely of nitrogen. Now that is the chief diet of the foul-brood bacteria (it is called bacillus, because of its shape). Is it in the honey, or only in the brood? and why does it thrive in the brood and not in the bee after it is out of the cell? I want to ask those who know.

Have you ever fed a healthy colony on honey from a diseased colony? and have they thereby become diseased? It seems that Mr. Rockenback has, and proved that it does not. (See *Progressive Bee-Keeper* for July). He seems to have had foul brood among his bees in the very worst form.

According to Mr. France's experience, the spores will survive drying for at least eight years. Now, according to the best authorities on bacteriology, the spores that survive drying a long time are frequently conveyed in the air in form of dust-particles only when dry, or might be when the air be moist, such as fog or when raining. No bacteria will leave a moist medium and travel in dry air; it must be dried first. The laws of gravity also affect all microbes in their travel in the air.

Now, one thing more: Do, or do not, any microbes originate spontaneously? As far back as 1862, Louis Pasteur, the world's greatest bacteriologist, arrayed against the world's greatest scientists of that day, proved by thorough tests that there was no such thing as spontaneous generation, or, at least, it seemed so, for M. Flourens, secretary of the Academy of Science, said: "There is, therefore, no such thing as spontaneous generation." To doubt still is not to understand the question. (See life and work of Pasteur, page 63.) Still, when we take into consideration that the germs of cholera can stand only drying for a few hours, and sometimes it will break out from seemingly no cause except filth and corruption, or overcrowding, lack of ventilation, or certain conditions may develop a new life of the vegetable of the lowest of all vegetable nature.

When Mr. France was asked at the Chicago convention if the disease would start of itself without inoculation, he answered, "Possibly once in a thousand times." I find that other scientists are not entirely satisfied on this question. It is well that we understand the important question more thoroughly. If there should be spontaneous generation once in a million times, then Pasteur's victory is all a mistake, and under favorable conditions they might originate much oftener.

Now, the bee-keepers owe a great deal to the efforts of McEvoy, France, Cook, and others, as it is no doubt they can cure foul brood—thanks to their untiring efforts—but is it not a fact that while it is being cured in one place it is being spread to others, and even possibly nearly every State has it more or less?

When once in a locality, even after cured, can we feel safe that there are not some dormant or dried spores waiting favorable opportunities to start the disease anew,



possibly in worse form than ever? Some say that in Cuba, where they probably have had the disease much longer than we, even the McEvoy plan does not cure. The old saying, that "an ounce of prevention is worth a pound of cure," is, no doubt, true in foul brood. If we can become more informed concerning the working of this disease, or the habits or diet of this germ, might we not be enabled to prevent wholly its introduction among our bees? Furthermore, might not the foul brood bacillus be propagated elsewhere except within a bee-hive?

The human mouth is a natural incubator for many germs; some are necessary to our health, digestion, etc. However virulent, microbes have been found in the human mouth, which, when injected under the skin of a rabbit, often resulted in death to the rabbit. (See page 176, *Microbes, Ferments and Molds*, Vol. No. 56, *Industrial Scientific Series*, by E. L. Troussart.) I do not think the bacillus alvei would be found in the human mouth, but mention this to show that some germs have different means of propagating.

The "A B C of Bee-Culture" says that the spores of bacillus alvei will withstand two hours boiling, and some be still alive. But scientific authority says that 60 minutes boiling at a temperature of 212 degrees F. will kill all kinds of spores. Now, no doubt many pounds of wax is annually rendered from combs thoroughly alive with spores, and probably even sent from Cuba, this being made up into foundation, distributed broadcast throughout the United States. What assurance have we that this wax has been subjected to 212 degrees F. for two hours? If it has not, can any one give us a truthful reason why foundation made from such wax would not start the disease?

If, as "A B C of Bee Culture" says, the spores will withstand two hours boiling, and live in a dried state eight years, as Mr. France has proven them, they surely can live in foundation unless boiled as stated. I am inclined to believe that since the McEvoy and France plan of treating foul brood began, the disease is being distributed in foundation. Formerly all diseased combs were burned. I hope, however, that I am mistaken.

I believe I understood Mr. France to say at the Chicago convention, that when he rids an apiary of foul brood he has a wax-press with him, and renders up the wax. I would like to ask Mr. France whether he boils the wax two hours or more, or even for 60 minutes. Also, what is done with this wax—is it sold on the market? I understand that Mr. France has tested this matter by taking wax so rendered to the manufacturer and using the foundation afterwards, and no disease resulted. I would like to ask Mr. France, in all kindness, do you firmly believe that all such wax, innocently bought on the market, would be treated as that was, or heated as that was, that is, by all United States wax-foundation manufacturers? Knox Co., Ill.

## Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

### Sulphur for Bee-Paralysis.

I agree with the bee-man, sulphur will cure bee-paralysis. I have used it for two years, when the bees were dying off with it. The way I did was, I took off the cover and sifted it down between the frames in the top box, but I did not spare the sulphur. I then covered them up, and went to the front and put a half cupful on the alighting-board and entrance way, so they would be obliged to go through the sulphur to get into the hive. I repeated the treatment three times. I did not disturb the brood-frames in the brood-chamber; the brood hatched out all right, and they were as strong as any in the apiary.

Merced Co., Calif., Sept. 3. MRS. ARTIE BOWEN.

This is confirmatory of the testimony of Mr. O. O. Poppleton (see page 535). Your plan of proceeding, however, is a little different. He sifted the sulphur with his fingers directly into the brood-chamber, while you put it in the surplus chamber. Of course, it would be likely to sift down into the brood-chamber from the super. Mr. Poppleton also took the precaution to remove unsealed brood or eggs, as these are injured by the sulphur. You do not say just how

you sifted in the sulphur. Mr. Poppleton tried an insect-powder gun, but found he could do better work with his fingers. Would not a pepper-box or flour-dredge work well? Possibly it should be specially made, with the perforated part long and narrow, so as to deliver the sulphur not on the top-bars, but in the space between them.

### Blue Vitriol to Kill Grass.

Alva Agee, in the *National Stockman and Farmer*, gives the following for driveways, walks, etc.:

"All grass and weeds can be exterminated in driveways, walks, etc., by a very strong solution of blue vitriol. I prefer to dissolve one pound of the bluestone to each one gallon of water, and enough of the solution is used to wet the surface of the ground slightly. It is far superior to salt. To dissolve as many pounds of the bluestone as there are gallons of water, it is necessary to suspend it in a bag at the surface of the water, as the strongest solution sinks to the bottom of the barrel. The solution eats through tin quickly."

Why would this not be a fine thing to use in the apiary to keep down the grass and weeds around the hives?

### Clipping Queen's Wings.

I enjoy reading the *American Bee Journal* very much, and especially our own department. I purchased 2 colonies a year ago last fall, and increased to 5, but lost one last spring. I know very little about handling them. My uncle advises me some, but he lives about 4 miles from me, so I have to blunder along most of the time.

I wanted to clip my queens this spring, but felt timid about it, as I have no text-book, and I never saw any one clip a queen. I had very little honey last year, but I am in hopes to have more this year. There is lots of white clover in blossom here. It seems favorable for a good crop.

NINA BURGETT.

I know just how nervous you feel about clipping those queens, but really it is not such a dreadful thing to do, after all. First catch the queen by the wings, then hold her by the head and thorax in the left hand, slip the scissors under the wings on one side, give a clip, and the thing is done.

Bee-Lore in the Public Schools seems to be on a par with a good deal of the bee-lore in general found outside of the bee-papers and bee-books. This view is confirmed by the receipt of a number of passages sent by Ella Anderson, who is very likely one of the "school ma'ams" of the great State of Texas. Concerning the passages quoted, she says: "The above is a specimen of the way in which bee-keeping is taught in our school-books. It has been copied 'word for word' from one of the most common books now in use." Amongst the information given is this:

"First of all we see some half-dozen bees around the door. . . . If we approach too near the front of the hive, one of these sentries will dash forward with an angry buzz; and if we do not wisely take the hint, the brave little soldier will soon return with help from the guard-room to enforce the command."

Fancy a cross bee letting up to go and get some other bee to do the stinging.

"The honey-gatherers and the 'wax-gatherers' carry their stores in their throats." Do they gather the wax from flowers, or where? and is so much wax in their throats a sure preventive of croup? Just one more precious bit:

"The honey-gatherers and 'wax-gatherers' draw in the sweet juices from flowers by their 'trunks.' The 'trunk' serves as a mouth and pump. The liquid passes through this into the throat, and is thus carried to the hive."

Isn't that richness for you?

**Why Not Help a Little**—both your neighbor bee-keepers and the old *American Bee Journal*—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

## Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.  
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

### TEXAS AND APICULTURE.

Texas the only State having an experimental apiary, and the apiary manned. Hardly thought it. Well, one out of Uncle Sam's family of forty-five is some better than that apiculture should be totally ignored. Credit to Texas!

Wonder what Texas legislature was thinking of when they supplied a foul-brood law, and no funds to enforce it. Well, now, maybe they thought apicultural public spirit needed a little cultivating—and that if a few hundred dollars of cash were appropriated it would kill off the desirable crop. Page 533.

### NUMBER OF BEE-FARMS—AN ERROR.

So taking the United States as a whole only one farm in eight has bees, but in Texas one farm in six. That, with the fact that Texas is a very big State, and comprising considerable extra-good bee-territory, has put them nominally at the head.

Who is responsible for this enormous Munchausenism, and what did the original author intend to say? "The average production of wax per colony for the United States was 43 lbs.; for Texas, 41 lbs.; for Arizona, 69 lbs.; and California, 89 lbs." Thus, in Texas an average colony yields 12 pounds of honey and 41 pounds of wax. Page 534.

### BEE-PARALYSIS AND ITS CURE.

I think Mr. O. O. Poppleton's article on paralysis to be a very instructive one. Tallies well with the general puzzlement on the subject. An erratic disease with no visible rules. Colonies in apparent health suddenly cut down to a remnant, and diseased colonies suddenly recovering without known cause. This last, if correct, may be relied on to furnish us with a large crop of worthless "sure cures." But we see Mr. Poppleton has a sure cure himself—dusting every bee with sulphur, after the brood is all taken away. But he doubts whether the cure is of much practical value because he finds the colony, when the cure is accomplished, to be so weak. If he's right, that the disease is wholly of the adult bees, and not at all in the brood, that will greatly help the apiarist in making his fight. New, healthy colonies can be built up, and all old diseased bees destroyed.

And an important riddle this is: "While I am satisfied that it is to a limited extent contagious, I do not know exactly how the contagion is communicated." Page 535.

### WHILE MAN REMAINS—AN APIARY CART.

While man remains on the earth, eh? Quite a benediction. Well, why not the American Bee Journal while man remains on earth? It will continue unless it stops; and why should it stop, Mr. Parker?

You're right to agitate for just the right kind of a honey-transporter about the apiary. I use a hand-cart, which is much better than a wheelbarrow in some respects—worse, if anything, about getting tipped over; and the lifts are too high. Just comes to me that perhaps a four-wheeled hand-cart is the thing—a hand-cart with the body all in front of the wheels, and low down, and furnished in front with two light wheels no bigger than plow wheels—which same are to carry, or to be carried, according to load and circumstances. Must our vehicle have springs, or can we do without them? Page 541.

### BIG JACK-KNIFE A GOOD APIARY TOOL.

The apiary tool for most constant use might very well be a jack-knife if it was a big enough one. But where will one find a comfortable assortment of big jack-knives to choose from? Just glance over the stock of a big city house once. Disgustingly little things almost all of them—as if the world were peopled with dudes and babies. Perhaps there will not be one in the stock even half big enough for the purpose named. Fashion. Cowardice. Half mankind don't dare to carry a knife as big as they know they need. Years ago it got to be a sort of a test—country man carried a big knife, and the city man carried a little one—till callow young men everywhere wanted to be seen with the city man's kind of knife. The manufacturer would just as lief

make big knives; but he can't afford to make them unless some one will buy them. Page 542.

### DROWNING QUEENS FOR INTRODUCING.

Will the drowned-and-brought-to-life queen be any better than the ruined-in-the-mail queen, Dr. Miller? Important conundrum, which, I guess, we will credit to you, Mr. A. C. F. Bartz. Dr. Miller kind o' got away when I tried to catch him for cutting off the queen's legs; but we've got him this time for drowning her—on his own confession. Page 542.

### THE IDEA OF SUGAR CAUSING FOUL BROOD!

Quite an idea to go on the "important if true" list is suggested by Mr. J. M. Hobbs, on page 543. He is quite sure that the feeding of sugar greatly favors the development of foul brood. Barely possible that there may be something in this; but some of the folks will say, "Sugar!"

## Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

### Wintering a Small Colony—Buying Bees.

I am a beginner and am desirous of working with bees and having them, and would like a little information.

I have one colony of bees that I hived while swarming, July 10, in the railroad yards, and carried them 100 miles on my engine. I put them in a hive the next morning and they went to work at once, early and late. Now what I wish to know is this:

1. The hive is a 10-frame hive with foundation, frame 9x7 inches. How many of these frames full will it require to winter this colony, there being, as near as I could judge, about one or one and a half cupfuls of bees?

2. The honey-flow has been good, but it is a little slack now, while pollen is very good. I placed about one-half pound of good sugar syrup in front of a hive, which they carry in in about four hours each day. Is this all right, in order to save feeding or disturbing the bees while in winter quarters?

3. Where can I procure a few good colonies stocked with queens, and at what time would you have them shipped? I wish the golden Italians already in the hives. MISSOURI.

ANSWERS.—1. If not more than 1½ cupfuls of bees are in the hive, they would not consume the honey in one full frame; but it is pretty safe to guarantee that so small a colony will not live till spring. Their chances may be better if you put them in a cellar for the winter.

2. Yes, that's all right, if they haven't enough stores.

3. It is now so late in the season that unless you have a specially good opportunity to obtain them conveniently near and at a bargain you will do well to wait till next spring. Look out for the advertisements in these pages about that time, and you may see what you want. By making inquiry it is possible you may be able to supply your wants from bee-keepers near you, for you will find it expensive business having full colonies sent from a distance. It would cost less to buy nuclei in the spring and build them up.

### Queen Questions and Some Others.

1. How should bees act when favorable to accepting a queen introduced to a colony that has been queenless perhaps ever since the colony was hived last May?

2. What do bees mean by one grabbing another, a strange bee and two or more run round the prisoner as if to examine it while the other holds to it? This looks to me like they were playing highway robbery—but only get back their own. Do they thus rob a bee?

3. What way do you account for my finding, in almost if not every hive examined, unsealed queen-cells? Certainly they can't contemplate superseding.

4. Should a young queen hatch out at this season (July 31) what chance would she have to become fertile when all the colonies have disposed of their drones?

5. Would she go unfertile until next spring, when the drones appear, and then meet the drone? and would such a queen be of any value?

6. Would she lay drone-eggs between now and then, or remain as a dead-head in the hive?

7. You say it is easier to introduce a queen to a colony that has been queenless only two or three days. How would you count the time, from the time you remove the old queen, or should the old queen be removed for 48 hours before the queen to be introduced is placed in the hive? Or, would you remove the old queen and immediately put in the other, enclosed in her cage, as it would require at best from 24 to 48 hours for the bees to release her?

8. Should a good queen lay eggs all through the winter in this



climate, or is there a time with all queens of every climate when they are fully at rest from laying? Would feeding a colony cause a queen to continue to lay?

9. Would frames put in crosswise, let them be brood or extracting shallow frames, make any difference with the bees accepting and filling them, and say the brood-chamber frames are lengthwise and the super frames crosswise?

MISSISSIPPI.

ANSWERS.—1. It is easier to tell by looking at them whether they feel like accepting her than it is to tell how one tells. If the bees are hostile to her, they may be grasping the wires of the cage as if trying hard to get at the queen, while if they feel kindly toward her they sit quietly and loosely on the cage. That's not telling you very much, is it? Well, I may as well tell you that if the case were right here before me, I couldn't always tell for certain. They might appear to be looking as sweet as you please at the queen, with murder in their hearts all the while.

2. Yes, a strange bee appears often to be made to give up its honey voluntarily, saying, "See here, girls, if you'll just let me off I'll give you every bit of honey I have."

3. It must mean one of three things—swarming, supersedure, or queenlessness.

4. She would have no chance if all drones were absent, but there are generally at least a few drones at any time when bees are daily flying, even if you can't find any.

5. I don't know; I wouldn't give much for her chance. Some say they have had queens fertilized in the fall that did not lay till spring, and that they were all right. But a queen whose virginity extends from fall to spring might safely be warranted as worthless.

6. A virgin reared in the fall and not fertilized before winter would probably lay no eggs before spring; and if she then should lay any eggs they would produce only drones.

7. The time a colony is queenless should be counted from the time the queen is removed. A common way is to remove the old queen and put in the caged queen immediately, the arrangement being such that it takes about two days for bees to release the new queen. But that "about" is not very definite; sometimes a queen is released in less than a day, sometimes in three days or more. It is claimed that a still better way is to put the caged queen in the hive without disturbing the old queen, leaving no chance for the bees to release the caged queen; then 48 hours later to remove the old queen, and give the bees a chance to release the caged queen.

8. I don't know, but I think a queen takes at least a short lay-off from laying in any climate. Feeding continuously is likely to induce laying; but sometimes it's very hard to start laying. But continued feeding when the flow stops would be likely to keep the queen laying.

9. It wouldn't make any difference.

### Queenless Colonies Balling the Queen.

1. About the first of this month (September), in looking over my bees I found Nos. 10, 12, 13, 17, 29 and 30 with no eggs, larvae or brood of any kind, and being so early I took it for granted they were queenless. I had three or four laying queens in nuclei, so I just turned them loose in some of the queenless colonies and they were all ac-

cepted. I gave the others frames containing eggs in all stages, and ordered some queens, and was surprised to find none started. So I run them through the perforated zinc and found no queens, and introduced my queens and they were accepted all right. Why did they not start queen-cells?

2. As they must have been queenless at least 21 days, why did they not have a laying worker?

3. I left one nucleus to themselves, when I took their queen, and they started several cell-cups over cells of bee-bread but none on cells with eggs. Why did they do that?

4. By some unaccountable blunder I marked one hive queenless that had a laying queen with plenty of brood, and introduced a fine queen. Yesterday they had her nearly let out, and to-day she was out, and I opened the hive to see if she was all right, and discovered my blunder; and while hunting for my queen I found the old one balled in the bottom of the hive, but could not find my new one. I left no bees in the cage when I introduced the queen. Why did they ball their queen?

IOWA.

ANSWERS.—Oh, dear! what makes you send so many hard ones all in one bunch? I don't like to use up my whole stock of "I don't know" answers, so must guess at some other answers the best I know how.

1. It is possible that so late in the season, and so near the time for the cessation of laying, the bees didn't think it worth while to bother about starting queen-cells. A better answer is that queenless bees have a trick of failing sometimes to start cells from brood given—not such a very uncommon occurrence, either—and no one seems ever to have given any reason for it. Just the way the bees have.

2. Better say "laying workers," for generally a lot of those nuisances are present. Laying workers don't always set up business in 21 days of the removal of the queen. In this case, too, there was less chance for it, because it was late in the season, and laying workers are not likely to start after the time when egg-laying ceases naturally in some colonies.

3. Can't make even a guess at an answer.

4. Perhaps for protection. It is not a very uncommon thing for bees to ball their own queen when alarmed in any way. The presence of a strange queen would suggest to them that their own queen needed protection. In one case, however, I had a queen protected to death because some strange queens were caged in the hive.

### Removing Supers from Hives.

1. When should all supers be removed from the hives?

2. Will the bees feed on honey in the super now, or from the brood-chamber?

ILLINOIS.

ANSWERS.—1. As soon as all storing is over for the season. In white-clover regions it is the best to take off supers at the close of the white-honey harvest, and then put them on again when needed for a fall flow, if a fall flow comes.

2. Both. As brood-rearing slackens, and empty cells appear in the brood-chamber as a consequence, you may count on the bees carrying down honey out of the super to store in the brood-combs.

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## Beedom Boiled Down

### Whisk-Broom Bee-Brush.

There has been so much said in the journals relative to bee-brushes that I want to add just a few words. It seems to me that there has never been a first-class brush described; and it seems to me that, when we revert to a bunch of weeds, we are not making much advancement, aside from the untidiness of the apiary, in having weeds growing so plentifully that we can grab up a handful at every hive. We can all buy the best bee-brush at any store for 10 cents; and that is just an ordinary whisk-broom. Tack a sheet of sandpaper on your workbench or on a board and take hold of the handle of the whisk-broom with one hand, and with the other one press the end of the brush down flat on the sandpaper, and then pull it across it a few times, and you will have all the stiff points cut down so it will be pliable and soft, and no danger of mutilating the cappings. When brushing, hold the brush flat to the comb, or practically so; and if it gets daubed with honey, dip it in a dish of water, and it will be clean again, and the moistening makes it more pliable. I have one I have used for 15 years, and it is good for as many more. I always wet it before beginning my day's work.—ELIAS FOX, in Gleanings in Bee-Culture.

### Introducing Virgin Queens in Pairs.

This is the latest kink practiced by the A. I. Root Co., although the same thing seems to have been previously practiced by Swarthmore. The plan is thus given in Gleanings in Bee-Culture, as used by their apiarist, Geo. W. Phillips:

Here is a colony, we will say, that is queenless. Instead of giving it one caged virgin, to be released on the candy plan, he gives it *two* of flying age; but the loose slide protecting the candy is removed, exposing the food in one cage, leaving it in the other cage covered by the slide. The bees will release the queen of the first mentioned. In a day or so she will become fertilized, and go to laying. The other virgin is kept caged in the mean time. As soon as queen No. 1 is laying, she is taken out, and *at the same time* the slide covering the candy to the other cage is set back, the bees release queen No. 2. Before that is done, another virgin is put into the hive, caged with the candy protected. Queen No. 2 is accepted, and ere long begins to lay. She is removed, and the slide of cage No. 3 is slid back, and another virgin put in, and so on the cycle proceeds. The point is here: Both queens while in the hive acquire the scent of the bees and of the comb, so that when one queen is removed the other queen is already introduced except releasing, which the bees do in a few hours, and she again is in a fair way to become the mother of the flock. During the interim between the time the queen is released and when she becomes laying,

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## Something FOR OUR Bee-Keeping Sisters in the Winter Time.

We think all ladies will agree with us in saying that every man should at least understand some business, with which, in case of necessity, he could support himself and family. The wealthiest people frequently come to want, and wretched, indeed, is the man who cannot earn a living after his wealth is gone. He sometimes fills the grave of a suicide. And why, in this enlightened age of progression, should not woman, as well as man, be able to depend on her own resources? In case her husband dies in poverty, must she starve or depend on charity? In case her husband fails to provide and grossly mistreats the woman he has sworn to cherish, must she humbly submit? **A THOUSAND TIMES, NO!** Let every woman, before she marries, have some knowledge that can be used to make her a living. Every mother, rich or poor, should make her daughters, in a certain degree, independent, by giving them some kind of a trade, and teaching them to be self-reliant. Mothers should have their daughters learn to sew, and not neglect this important part of their domestic education. The

the queen is acquiring the scent of the colony.

But Mr. Phillips goes one step further. Here is a colony that is not queenless, but we wish to sell the queen in 2 or 3 days. He accordingly cages the virgin in the hive, and 3 days after removes the laying queen, exposes the candy of the caged virgin so the bees can release her, when she is immediately accepted. There, don't you see, there is a lapse of only a few hours of actual queenlessness? We will say that, in 5 hours after the laying queen is removed, the virgin is stalking abroad over the combs, quite at home.

~ This thing is no experiment. We have been testing it for weeks to see if it would work under all conditions.

If the virgins are hatched in nurseries, and a supply of them is kept on hand, no colony need be queenless more than long enough for the bees to eat out the candy, which I should say would take about 5 hours as we provision the cages. By this plan one can get almost a double output of queens.

### Spraying Fruit-Bloom Proves to Be a Boomerang.

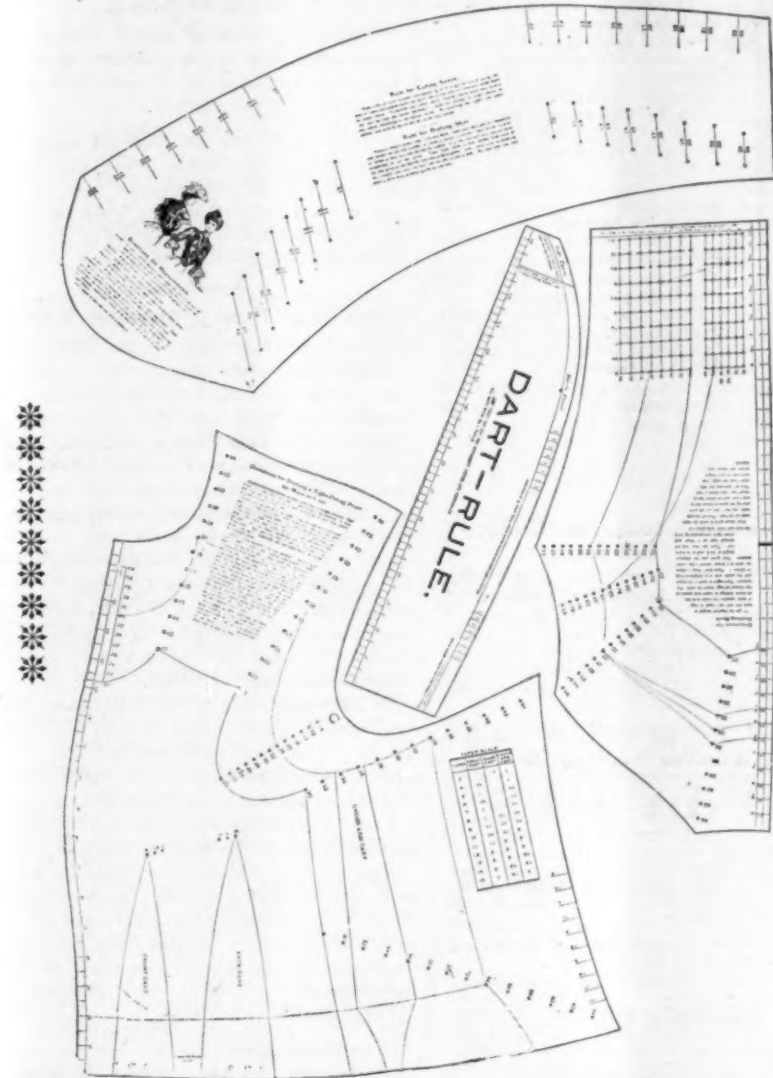
Last year I had my colonies very strong in order to get as much of the apple honey as possible, that being my favorite honey; and just when the bees began to store rapidly I noticed all at once thousands of them dropping around the house-apery and in my yard; and my colonies were depopulated a half, if not more, in 2 days' time. I was satisfied that poison had been used in spraying fruit-bloom, and immediately made inquiry. All parties denied spraying, yet I found that one had purchased a fruit-sprayer and had sprayed his trees at that time, even though he denied doing so. However, I made a public announcement that the party or parties who killed my bees by spraying his fruit during the time of bloom would also destroy his own fruit, and my prediction proved true; for the same party that had sprayed his trees at that time scarcely had any sound fruit, while an orchard within a stone's throw had hundreds of bushels of fine matured fruit, and no spraying whatever had been done; so I guess there will not be any more spraying done during full bloom in this section.—J. A. GOLDEN, in *Gleanings in Bee-Culture*.

### A Model Bee-Cellar in Northern Michigan.

The cellar is 14x24 inside. It is built 3 feet under ground and 4 feet above. The foundation is a stone wall 3 feet deep with 6 inch studding on the wall, boarded both sides, and filled in with sawdust. There are also inch cleats nailed on inside, and lathed and plastered, making a 1-inch dead-air space.

In building the stone wall we laid in 2x6 plank, letting them project 2 inches, and lathed and plastered on these, making a dead-air space on the stone wall, to do away with the dampness.

In one corner there is a tile drain, or intake, for fresh air, leading out 6 rods under ground, 3 feet deep. The cellar is built on higher ground, which makes it very convenient for underground ventilation. There is also a ventilator



daughter so taught will not only make a better wife and mother, but will also be more likely to secure a better husband, and will always command his respect. He will not look upon her as a helpless "know-nothing," but will know that if he fails in his duties, she can live without him, and this can only strengthen the bond between them. A thorough knowledge of dress-making can always be turned into gold, and become the means of support for the mother and her little ones. She may never have to use this knowledge in this way, but she has a trade and can use it if necessary.

The outline cut shown herewith is a condensed copy of **THE NEW LONDON LADIES' TAILOR SYSTEM** for drafting and cutting ladies' and children's garments. For simplicity and accuracy it has no superior among the more expensive systems. Thousands of girls have learned more about drafting and cutting with this system than they knew about it after serving their apprenticeship in some of the dressmaking shops of the United States and Canada. Thousands of the best garment cutters have laid their complicated and expensive system aside, and are now using **THE NEW LONDON TAILOR SYSTEM**. Thousands have been sold at \$5.00 each, but we mail it **Free** to a paid-in-advance subscriber to the American Bee Journal for sending us two new subscribers at \$1.00 each; or we will send it to any one with a year's subscription to the American Bee Journal, both for \$1.75; or, we will mail the Tailor System alone for \$1.00. Address all orders to

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leading out through the roof 12 inches square. This comes within 3 feet of the cellar bottom, and is arranged to shut off too much draft. The outside has been reinforced with a foot of sawdust coming above the cellar a foot, with tarred felt covering the whole. The floor above is made frost-proof by nailing on ceiling, filling in with sawdust between the ceiling and floor, and nailing inch strips to the ceiling, and then lathing and plastering. This cellar has never been cold enough to freeze, the temperature ranging from 41 to 45. I can put in 200 8-frame hives if necessary. I have wintered 150 in this cellar very nicely. It stays very dry and nice all winter. The upper part is used as a workroom and for extracting. The cost was about \$150.—JAMES HILBERT, in *Gleanings in Bee-Culture*.

#### Good Honey at 10 Cents Cheaper than Thin at 8.

I tested some well-ripened honey a few days ago, and it tested about 14½ pounds to the gallon. I figured out how much water it would take to make honey 13 pounds to the gallon. It takes about 28 percent of water. That is, take 100 pounds honey, 14½ pounds to the gallon, add 28 pounds of water to it, 10 pounds to the gallon, and you still have a honey 13 pounds to the gallon, and the manufacturer who buys the best honey at 10 cents a pound gets it cheaper than the one who buys the other at 8 cents.—MR. DARLING, in *Canadian Bee Journal*.

#### Our Sweet Tooth.

That Uncle Sam has a "sweet tooth" is demonstrated by the record of sugar importations for the year, which have increased to the largest total ever known. In addition to the sugar raised in this country more than 5,000,000,000 pounds have been imported, which with the domestic production, would give each man, woman and child in the United States about seventy-two pounds each per annum. As many persons do not eat anything like this amount and much sugar is introduced into the human body in other forms than the refined product, there must be many people who consume more than their own weight of sugar in a year. The quantity eaten in the form of confectionery is enormous, and, if sugar would do it, America would be a land of sweetness if not of light.—Boston Transcript.

To eat one's own weight of sugar in a year is a menace to health, if not to life. What a pity those enormous consumers of sugar could not be induced to consume their sugar in the more wholesome and delicious form of honey.

#### The California Sages.

White sage is perhaps generally thought by outsiders to be the principal one of the sages; but Californians say it cuts no great figure, the black and purple sages being away ahead, both in quality and quantity.—[Yes, the average Easterner gets the impression that the white sage is the main honey-plant of California, because all California honey from sage is named *white* sage. The black sage produces



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a great deal more, and the purple or button sage comes in as a close second. But white *sage* honey is not misnamed, because it *is* white, and it is *sage*, but not necessarily *white-sage-plant* honey. —ED.]—Stray Straws in Gleanings in Bee-Culture.

### FROM MANY FIELDS

#### Great Ragweed.

What is the enclosed weed? I think the local name here is "bull-weed." Bees are fond of it. T. C. K.

Knox Co., Tenn.

[The plant is the Great Ragweed, and grows abundantly along moist river-banks. The bees may get considerable pollen from it, but not much honey. Botanists know the weed as *Ambrosia trifida*, and it belongs to the great Composite family.—C. L. WALTON.]

#### Amount of Honey One Bee Stores.

I saw in the *American Bee Journal* a question asked as to how much honey a bee can carry during its life. I am an old bee-hunter, and have found a good many bee-trees in the woods. I have seen a bee lick up two thin drops of honey at one time and carry it home. If it can carry two drops of honey at a time, how many drops can it carry in one day? I will say it can carry three loads of honey in one hour. If so, it can carry 30 loads in 10 hours, or 60 drops, which make a teaspoonful of honey. So a bee can carry 26 teaspoonfuls of honey in 26 days, or the time of its active life. This makes about one-half of a small teacupful of honey.

Dr. Miller says the life of a worker-bee is 26 days, and I think so, too. I don't say that all the worker-bees will carry two drops of honey at a load, but when a bee sucks its fill of honey it can carry two drops.

I have watched bees for the last 30 years, and I am satisfied that my figures are right.

I don't say that a brown or black bee will carry two drops of honey at one time, but I do say an Italian bee will do it. So one-half a teacupful of honey is all that a bee will store during its life. That is my idea; and I think I am right. E. E. WILSON.

Van Buren Co., Ark., Sept. 15.

[Even if it is admitted that a bee can store a half teacupful (or say ¼ pound) of honey during its working life, it would not be safe

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to estimate from that basis what an average colony of bees will produce during a season. Suppose there are only 40,000 bees in a colony during the 26 days, and only half of them do business, according to Mr. Wilson, they should carry in 5000 pounds. Perhaps 200 pounds of honey would be an exceptional yield for 26 days; then what became of the other 4800 pounds?

The thing can not be figured out. It is all guess-work. And one man's guess is about as good as another's in such a case.

We "guess" we'll eat the honey and let the other fellow do the figuring.—EDITOR.]

### A Peculiar Year—Swarming.

The last month and a half has been anything but favorable for honey-production in this locality. I think the crop will fall much below the estimate of many. And I fear many colonies, unless they are looked after and fed, will not go through the winter, if we should have a severe one.

I said this had been a peculiar year; well, it seems so to me. Let me tell you something—but, say nothing about it, for I feel almost ashamed of myself when I think of it. I have had 54 swarms from 31 colonies, and how many more there would have been no fellow can tell if I had not struggled continually to prevent swarming.

I have made a colony from a caged queen left on a table with a box over her to protect her from the sun. Bees came from all parts of the yard and clustered on the cage. They did not come at swarming-time, but one at a time, till there were 200 or 300 bees, which stayed day and night till the fourth day, when they swarmed as naturally as any swarm as you ever saw; but the queen being caged, they returned and clustered again. I made a nucleus colony for them; added a comb at a time as they needed, and now they are a good colony. Who says one cannot get a colony of bees if he has a queen? Wm. M. WHITNEY.

Walworth Co., Wis., Sept. 31.

### CONVENTION NOTICES.

**Illinois.**—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held in the Court House, in Rockford, Ill., Tuesday and Wednesday, Oct. 20 and 21, 1903. A good program is being prepared, and all interested in bees are invited to attend.  
Cherry Valley, Ill. B. KENNEDY, Sec.

**Connecticut.**—The Connecticut Bee-Keepers' Association will hold their fall meeting in the Capitol at Hartford, on Nov. 4. All bee-keepers are cordially invited to attend. For full information, write the Secretary.

MRS. EDWIN E. SMITH, Sec.  
Watertown, Conn.

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## BEE-BOOKS

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**Forty Years Among the Bees**, by Dr. C. C. Miller.—This book contains 328 pages, is bound in handsome cloth, with gold letters and design; it is printed on best book-paper, and illustrated with 112 beautiful original half-tone pictures, taken by Dr. Miller himself. It is unique in this regard. The first few pages are devoted to an interesting biographical sketch of Dr. Miller, telling how he happened to get into bee-keeping. Seventeen years ago he wrote a small book, called "A Year Among the Bees," but that little work has been out of print for a number of years. While some of the matter used in the former book is found in the new one, it all reads like a good new story of successful bee-keeping by one of the masters, and shows in minutest detail just how Dr. Miller does things with bees. Price, \$1.00.

**Bee-Keeper's Guide, or Manual of the Apiary**, by Prof. A. J. Cook, of Pomona College, California. This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 544 pages. 295 illustrations. Bound in cloth. 19th thousand. Price, \$1.20.

**Langstroth on the Honey-Bee**, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, \$1.20.

**ABC of Bee-Culture**, by A. I. & E. R. Root.—A cyclopedia of over 500 pages, describing everything pertaining to the care of the honey-bees. Contains about 400 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.30.

**Scientific Queen-Rearing**, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, \$1.00; in leatherette binding, 60 cents.

**Bees and Honey, or Management of an Apiary for Pleasure and Profit**, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages. Price, in cloth, 75 cents; in paper, 50 cents.

**Advanced Bee-Culture, Its Methods and Management**, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages; bound in paper, and illustrated. Price, 50 cents.

**Bienen-Kultur**, by Thomas G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

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**Dr. Howard's Book on Foul Brood**.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

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## HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Sept. 18.—Sales are not frequent enough to keep receipts cleaned up. They are made on a basis of 13@14c for comb of the best grades. Extracted, white, 6¢@7c for clover and basswood, and 6¢@7c for other white honeys; amber, 5¢@6¢c; according to flavor and package. Beeswax, 30c. R. A. BURNETT & Co.

KANSAS CITY, Aug. 25.—Receipts of comb honey more liberal; demand improving. We quote fancy white comb, 24-section case, \$3.25; No. 1, white amber comb, 24-section case, \$3.00; No. 2, white amber comb, 24-section case, \$2.75; Extracted, white, per lb., 6¢c; amber, 5¢@6¢c. Beeswax, 25¢@30c. C. C. CLEMONS & Co.

ALBANY, N.Y., Sept. 19.—Honey market firm on light receipts so far and good demand. We quote: Fancy white, 16c; No. 1, white, 15c; No. 2, 14c; buckwheat, 13¢@14c. Extracted, good demand just now for Jewish holidays, for candied honey, at 6¢@6¢c for dark; white clover, 7¢@7¢c; mixed amber, 6¢@7c. Beeswax, 30c.

H. R. WRIGHT.

CINCINNATI, Oct. 1.—Comb and extracted honey are coming in freely, and the demand is good with steady prices. We are making sales at the following prices: Amber extracted at 5¢@6¢c; white clover, 6¢@7¢c. Fancy comb honey, 15c. Beeswax, 30c.

THE FRED W. MUTH CO.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13¢@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28¢@29¢ per pound.

HILDRETH & SEGELKEN.

CINCINNATI, Sept. 18.—The extracted honey market has weakened a little as white clover is offered quite plentiful; prices of sales I made ruled as follows: Amber, in barrels, 50¢@51¢; water-white alfalfa, 6¢@6¢c; fancy white clover, 6¢@7¢c. Comb honey, fancy water-white, 14¢@15¢. No sales for lower grades. Beeswax, 28c. C. H. W. WEBER.

SAN FRANCISCO, Sept. 2.—White comb honey, 13¢@14c; amber, 9¢@11c. Extracted, white, 5¢@6¢c; light amber, 5¢@5¢c; amber, 4¢@5¢c; dark amber, 4¢@4¢c. Beeswax, good to choice, light, 27¢@29¢; dark, 25¢@26c.

Most of the comb on market is of small lots, and while being very steadily held, fails to move as readily or to as good advantage as would straight carload lots of uniform and high grade. Extracted is in high request, with offerings of only moderate volume, and market firm at prevailing values.

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**WANTED—Comb Honey** in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. Thos. C. Stanley & Son, 244½ MANZANOLA, COLO., or FAIRFIELD, ILL.  
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### WANTED—Extracted Honey.

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**Long Tongues Valuable**  
South as well as North.

How Moore's strain of Italian roll in the honey down in Texas.

HUTTO, TEX., Nov. 19, 1902.

J. P. MOORE.—Dear Sir:—I wish to write you in regard to queens purchased of you. I could have written sooner, but I wanted to test them thoroughly and see if they had those remarkable qualities of a three-banded Italian bee. I must confess to you I am more surprised every day as I watch them. They simply "roll the honey in." It seems that they get honey where others are idle or trying to rob; and for gentleness of handling, I have never seen the like. Friend E. R. Root was right when he said your bees have the longest tongues; for they get honey where others fail. I will express my thanks for such queens. I am more than pleased. I will stock my out-apiaries next spring with your queens.

Yours truly, HENRY SCHMIDT.

The above is pretty strong evidence that red clover is not the only plant which requires long-tongue bees to secure the greatest quantity of nectar.

Daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75 cents each; six, \$4.00; dozen, \$7.50. Select untested, \$1.00 each; six, \$5.00; dozen, \$9.00. Safe arrival and satisfaction guaranteed. Circular free. I am filling all orders by return mail, and shall probably be able to do so till the close of the season.

**J. P. Moore, L. Box 1, Morgan, Ky.**  
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26th  
Year

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The business for many years conducted by George W. York & Co., at 144 E. Erie St., as agent for The A. I. Root Company's Supplies, is this day transferred to The A. I. Root Company, to be conducted as a Branch Office. All outstanding accounts will be paid George W. York & Co.

The policy of Branch House will not be changed. We shall continue to serve the interests of bee-keepers to the best of our ability, and to increase our facilities whenever possible for such service. Mr. York will still be in the same office with us, and the benefit of his years' of experience with this trade will thus be available.

Please note change of name to avoid confusion in our work.

Oct. 1, 1903.

**THE A. I. ROOT COMPANY.**

All orders, remittances, inquiries, etc., should be addressed to The A. I. Root Company, 144 E. Erie St., instead of George W. York & Co.

### STATEMENT BY GEORGE W. YORK & CO.

TO OUR CUSTOMERS AND FRIENDS:

In transferring back to The A. I. Root Company the bee-supply business which we took over from them some years ago, we do so with regret, as we have labored to build up a large and honorable trade in bee-appliances, and value beyond expression the generous patronage accorded us during the years. We trust the same will be continued to our successors in the business.

Please note that this transfer does not in any wise affect our publishing the American Bee Journal, or handling bee-books and queens. But we expect from now on to be able to devote more time to the Bee Journal, as for years we have had "too many irons in the fire" to give it the attention it requires.

**GEORGE W. YORK & CO.**

Chicago, Ill., Oct. 1, 1903.